

efficiency of the UNC Chapel Hill CHP facility – 70% – is twice that of the average U.S. power plant. Some of the innovations of the facility include: using the steam to run a turbine and a generator which meets a third of the peak campus demand; the high pressure steam from the boilers is used for the heating and cooling of all buildings on campus and the hot water in residence halls, the hospital and research labs; use circulating fluid out of bed combustion to burn coal which reduces the release of NO<sub>x</sub> and SO<sub>2</sub>; and central chilled water plants, cooled at night when energy prices are low, which use steam to generate chilled water for all campus air conditioning needs.

Mr. DuBose's presentation is available online at the following link: [Raymond E. DuBose, Director, Energy Services Department, University of North Carolina at Chapel Hill.](#)

#### October 23, 2007

*Brock Nicholson, Deputy Director of DAQ, Mitch Peele, Tim Toben, George Everett, Michael Shore, Stephen Smith, and Tom Peterson* presented an update on the activities of the CAPAG technical work groups. The CAPAG mitigation options are being considered by the following technical work groups:

- Agriculture, Forestry, and Waste
- Energy Supply
- Residential, Commercial, and Industrial
- Transportation and Land Use
- Cross-Cutting Issues

Tom Peterson also provided an update on the next steps in the CAPAG process. Mr. Peterson's presentation is available at the following link: [Tom Peterson, Executive Director, Center for Climate Strategies.](#)

#### December 4, 2007:

*William L. Chameides, Dean, Nicholas School of the Environment, Duke University*, presented on the extent to which carbon offsets may be reliably identified and quantified. Dr. Chameides defined offsets as "actions that remove or prevent the emissions of greenhouse gases in one location and are used to "offset" an equivalent amount of emissions at another location." Offsets can come from a wide range of activities, including renewable energy projects such as wind farms, biomass energy, or hydroelectric dams. Others include energy efficiency projects, the destruction of industrial pollutants or agricultural byproducts, destruction of landfill methane, and forestry projects. Offsets have a significant potential to advance climate mitigation, but also huge potential to frustrate climate mitigation if the offsets are not real. To qualify as a marketable carbon offset, the greenhouse impact of a change in land management must have three critical attributes:

- It must represent a net reduction in greenhouse gas emissions, or a net gain in the amount of carbon stored.
- The offsets must have a legal and specified owner.